

Going Digital: The Impact of Digital Adoption on Productivity

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Accelerating the diffusion of digital technologies is a key channel through which the slowdown in aggregate productivity growth could be reversed. Using a novel data set, this paper provides empirical evidence based on a cross-section of 25 countries and 25 industries over the 2010-16 period that a range of structural and policy factors can influence the adoption of digital technologies by firms. The focus is on a core set of productivity-enhancing technologies – cloud computing and front- and back-office applications – the adoption of which is enabled by the availability of high-speed broadband internet, and influenced by firm capabilities (e.g. skills) and incentives (e.g. competitive pressures). The effects of capabilities and incentives on adoption rates are captured via a differences in differences approach, by comparing industries that are more or less exposed to them due to their intrinsic characteristics (e.g. higher or lower knowledge intensity, higher or lower firm turnover). We find that (i) the roll out of high-speed broadband internet is a key enabler for the adoption of all digital technologies, (ii) improving organisational capital, the talent pool and its allocation has statistically and economically significant positive effects on adoption, and (iii) improving the business environment to facilitate entry and exit, the reallocation of resources and access to credit also positively affects adoption.